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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,135	07/19/2004	Hans-Joachim Hahnle	29827/40332	1567

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EXAMINER

BOYKIN, TERRESSA M

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/502,135

Applicant(s)

HAHNLE ET AL.

Examiner

Terressa M. Boykin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-27-05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by USPub 2004/0046151 see abstract, page 2 paragraphs [0016]-[0029] Claims 3.**

The reference discloses dispersions, which are used to increase the wet strength of paper. In the examples of the said patent, it is shown that the use of acryloyloxyalkylsilane, in particular .gamma.-methacryloyloxypropyltrimethoxysilane, improves the wet mechanical properties (wet tensile strength) both in water and in solvent. Preferably, the initiator systems and the surfactants, when they are used in the form of salts, are used in the form of ammonium salts.

At the end of the polymerization, the polymer dispersions are subjected to a treatment to reduce the residual monomer content with redox pairs. Redox pairs which may be used are those reducing agents which do not release formaldehyde are, for example, ammonium.

**Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 4147845 see abstract, cols. 1-4.**

**USP 4147845** relates to a process for reducing the monomer content in expandable thermoplastic beads which are produced by polymerizing an ethylenically unsaturated monomer or a mixture of such monomers in aqueous suspension in the presence of a blowing agent. The residual monomers in both the beads and the process water are reduced by treatment of the slurry of beads and water obtained after polymerization in a vessel at a temperature above 65.degree. C. in the presence of at least one water-soluble initiator. In order to avoid the expansion of the beads during the course of monomer reduction the vessel is kept completely filled with a liquid, preferably water, during the temperature treatment.

As examples of suitable water-soluble initiators for ethylenically unsaturated monomers may be mentioned well-known inorganic, free radical initiators, such as hydrogen peroxide and potassium or ammonium persulfates, or organic free radical initiators, such as hydroperoxides, cyclohexanoneperoxide or methyl isobutyl ketone peroxide. It is also within the scope of the invention to add a mixture of water-soluble initiators or a combination of a water-soluble and a monomer-soluble initiator, such as peroxides, e.g. lauroylperoxide, peroxidicarbonates, e.g. cetylperoxidicarbonate or azo compounds. The amount of water-soluble initiator can be within the range of 0.01-5% based on the weight of the charged monomer and preferably 0.1-2%.

Thus, each of the references disclose a method for treating residual polymers prepared from the same components as claimed by applicants. With regard to US **USP 4147845** any properties or characteristics inherent in the prior art, e.g. wet strengths

etc., although unobserved or detected by the reference, would still anticipate the claimed invention. Note *In re Swinehart*, 169 USPQ 226. "It is elementary that the mere recitation of a newly discovered...property, inherently possessed by things in the prior art, does not cause claim drawn to those things to distinguish over the prior art". Since the disclosed amounts are expressed differently and thus may be distinct from those claimed, it is incumbent upon applicant(s) to establish that they are in fact different and whether such difference is unobvious.

Thus, there appears to be no significant difference between the reference(s) and that which is claimed by applicant(s). Any differences not specifically mentioned appear to be conventional. Consequently, the claimed invention cannot be deemed as novel and accordingly is unpatentable.

#### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over 4766173 in view of 2004/0046151 see abstract, claims.**

**USP 4766173** discloses a method for reducing the residual acrylic acid present in water-insoluble polyacrylic acid water absorbent gel polymers which comprises treating

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these polymers with at least 0.5 mole of either amino acid cysteine or lysine per mole of acrylic acid present in said waters for at least 15 minutes at a temperature of at least 80 C.

The reference discloses a method for reducing residual monomers prepared from the same components as claimed by applicants except for the use of treating the polymer a primary or secondary amino groups.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the method of treating the polymer with a primary or secondary amino groups since USPub 2204.0046151 discloses the effectiveness thereof as well as the improvement of mechanical properties such as wet tensile strength as disclosed therein.

**Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over 2004/0046151 see abstract, claims.**

The reference discloses a method for reducing residual monomers prepared from the same components as claimed by applicants except for the specific use of treated the polymer in a diaper.

However, it is commonly known that a basic problem with commercially available water-absorbent resin particles has been the presence of residual monomers, which represent process inefficiency. Accordingly, it would be desirable to have a process for preparing a water-absorbent polymer product with reduced residual monomer. **USPub 2204.0046151** discloses dispersions, which are used to increase the wet strength of paper. In the examples of the said patent, it is shown that the use of acryloyl-

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oxyalkylsilane, in particular .gamma.-methacryloyloxypropyltrimethoxysilane, improves the wet mechanical properties (wet tensile strength) both in water and in solvent.

Preferably, the initiator systems and the surfactants, when they are used in the form of salts, are used in the form of ammonium salts.

Consequently, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the method of treating the polymer with a primary or secondary amino groups for use in producing diapers since USPub 2204.0046151 discloses the effectiveness thereof as well as the improvement of mechanical properties such as wet tensile strength as disclosed therein.

Consequently, the claimed invention cannot be deemed as unobvious and accordingly is unpatentable.

### **Correspondence**

**Please note that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site ([www.uspto.gov](http://www.uspto.gov) <<http://www.uspto.gov>>), from the Office of Public Records and from commercial sources. Applicants may be referred to the Electronic Business Center (EBC) at <<http://www.uspto.gov/ebc/index.html>> or 1-866-217-9197.**

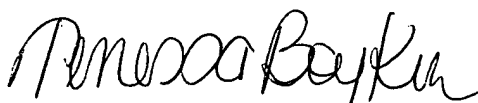
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Terressa Boykin whose telephone number is 571 272-1069. The examiner can normally be reached on Monday through Friday from 6:30am to 3:00pm.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. The general information number for listings of personnel is ( 571-272-1700).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tmb

  
**Examiner Terressa Boykin**  
**Primary Examiner**  
**Art Unit 1711**